

MATHEMATICS MAGAZINE

ARTICLES BY TITLES

INDEX TO VOLUME 39

JANUARY THROUGH DECEMBER, 1966

A connection between two theorems in the theory of Riemann-Stieltjes integration, <i>G. T. Cargo</i>	202
A curve of constant diameter, <i>J. F. Burke</i>	84
A decomposition of the integers to generate graphs, <i>N. R. Dilley</i>	30
A geometric interpretation of the solutions of $y'' = c^2y$, <i>D. A. Lind</i>	273
A geometrical solution of the three factory problem, <i>W. J. van de Lindt</i>	162
A maximal generalization of Fermat's theorem, <i>David Singmaster</i>	103
A new type of mean value theorem, <i>D. H. Trahan</i>	264
A proof of the formula representing the logarithm as the limit of a sequence, <i>R. F. Matlak</i>	64
A remark on a note of S. M. Shah, <i>S. Venkatramaiah</i>	225
A theorem of Schemmel, <i>Leonard Carlitz</i>	86
An exact perimeter inequality for the pedal triangle, <i>A. Zirakzadeh</i>	96
An extension of the mean-value theorem in E_n , <i>Chich-Chin Lan</i>	91
An inequality for the perimeter of the orthic triangle, <i>Leonard Carlitz</i>	289
Another look at differentiation, <i>J. H. Manheim</i>	89
Another remark concerning the definition of a field, <i>H. E. Vaughan</i>	161
Announcement of L. R. Ford Awards, <i>H. L. Alder</i>	258
Approximate trisection of an angle with Euclidean tools, <i>Tzer-Lin Chen</i>	261
Automorphisms of the complex numbers, <i>P. B. Yale</i>	135
Boolean matrices and switching nets, <i>Wai-Kai Chen</i>	1
Combinations, successions and the n -kings problem, <i>Morton Abramson and William Moser</i>	269
Convex solutions of implicit relations, <i>W. A. Brock and R. G. Thompson</i>	208
Curvature by normal line convergence, <i>J. A. Seiner</i>	147
Diagonalizing positive definite matrices, <i>James Duemmel</i>	226
Disjoint triangles in chromatic graphs, <i>J. W. Moon</i>	259
Editorial Note.....	300
Ellipse of least eccentricity, <i>N. X. Vinh</i>	203
Finding the cube root of binomial quadratic surds, <i>Kaidy Tan</i>	212
Functions of a dual or duo variable, <i>M. A. B. Deakin</i>	215
Generating a hyperboloid, <i>C. S. Ogilvy</i>	276
Geometrical interpretations of the inequalities between the arithmetic, geometric and harmonic means, <i>O. Shisha</i>	268
Graphical solution of difficult crossing puzzles, <i>Robert Fraley, K. L. Cooke and Peter Detrick</i>	151
Homologous point in the medial triangle, <i>D. M. Bailey</i>	236
Integers that are multiplied when their digits are reversed, <i>Alan Sutcliffe</i>	282
Linearization transformations for least squares problems, <i>W. G. Dotson, Jr.</i>	178
Logical paradoxes are acceptable in Boolean algebra, <i>P. J. van Heerden</i>	175
Maximum area of a region bounded by a closed polygon with given sides, <i>Huseyin Demir</i>	228
More on finite subsets and simple closed polygonal paths, <i>M. C. Gemignani</i>	158
Note on Newton's method, <i>L. M. Weiner</i>	143
Note on the matrix function $\sin \pi A$ and $\cos \pi A$, <i>J. C. South</i>	287
On approximating polygons by rational polygons, <i>T. K. Sheng and D. E. Daykin</i>	299
On complementing sets of nonnegative integers, <i>A. M. Vaidya</i>	43
On finite subsets of the plane and simple closed polygonal paths, <i>M. C. Gemignani</i>	38
On squares in arithmetic progression, <i>M. T. Goodrich</i>	87
On solutions of certain Riccati differential equations, <i>J. S. W. Wong</i>	141
On the complete independence of the axioms of a seminatural system, <i>S. T. Stern</i>	232
On the solution of the quartic, <i>R. W. Packard</i>	63
On the solution of the real quartic, <i>W. F. Carpenter</i>	28

MATHEMATICS MAGAZINE

ARTICLES BY TITLES

INDEX TO VOLUME 39

JANUARY THROUGH DECEMBER, 1966

A connection between two theorems in the theory of Riemann-Stieltjes integration, <i>G. T. Cargo</i>	202
A curve of constant diameter, <i>J. F. Burke</i>	84
A decomposition of the integers to generate graphs, <i>N. R. Dilley</i>	30
A geometric interpretation of the solutions of $y'' = c^2y$, <i>D. A. Lind</i>	273
A geometrical solution of the three factory problem, <i>W. J. van de Lindt</i>	162
A maximal generalization of Fermat's theorem, <i>David Singmaster</i>	103
A new type of mean value theorem, <i>D. H. Trahan</i>	264
A proof of the formula representing the logarithm as the limit of a sequence, <i>R. F. Matlak</i>	64
A remark on a note of S. M. Shah, <i>S. Venkatramaiah</i>	225
A theorem of Schemmel, <i>Leonard Carlitz</i>	86
An exact perimeter inequality for the pedal triangle, <i>A. Zirakzadeh</i>	96
An extension of the mean-value theorem in E_n , <i>Chich-Chin Lan</i>	91
An inequality for the perimeter of the orthic triangle, <i>Leonard Carlitz</i>	289
Another look at differentiation, <i>J. H. Manheim</i>	89
Another remark concerning the definition of a field, <i>H. E. Vaughan</i>	161
Announcement of L. R. Ford Awards, <i>H. L. Alder</i>	258
Approximate trisection of an angle with Euclidean tools, <i>Tzer-Lin Chen</i>	261
Automorphisms of the complex numbers, <i>P. B. Yale</i>	135
Boolean matrices and switching nets, <i>Wai-Kai Chen</i>	1
Combinations, successions and the n -kings problem, <i>Morton Abramson and William Moser</i>	269
Convex solutions of implicit relations, <i>W. A. Brock and R. G. Thompson</i>	208
Curvature by normal line convergence, <i>J. A. Seiner</i>	147
Diagonalizing positive definite matrices, <i>James Duemmel</i>	226
Disjoint triangles in chromatic graphs, <i>J. W. Moon</i>	259
Editorial Note.....	300
Ellipse of least eccentricity, <i>N. X. Vinh</i>	203
Finding the cube root of binomial quadratic surds, <i>Kaidy Tan</i>	212
Functions of a dual or duo variable, <i>M. A. B. Deakin</i>	215
Generating a hyperboloid, <i>C. S. Ogilvy</i>	276
Geometrical interpretations of the inequalities between the arithmetic, geometric and harmonic means, <i>O. Shisha</i>	268
Graphical solution of difficult crossing puzzles, <i>Robert Fraley, K. L. Cooke and Peter Detrick</i>	151
Homologous point in the medial triangle, <i>D. M. Bailey</i>	236
Integers that are multiplied when their digits are reversed, <i>Alan Sutcliffe</i>	282
Linearization transformations for least squares problems, <i>W. G. Dotson, Jr.</i>	178
Logical paradoxes are acceptable in Boolean algebra, <i>P. J. van Heerden</i>	175
Maximum area of a region bounded by a closed polygon with given sides, <i>Huseyin Demir</i>	228
More on finite subsets and simple closed polygonal paths, <i>M. C. Gemignani</i>	158
Note on Newton's method, <i>L. M. Weiner</i>	143
Note on the matrix function $\sin \pi A$ and $\cos \pi A$, <i>J. C. South</i>	287
On approximating polygons by rational polygons, <i>T. K. Sheng and D. E. Daykin</i>	299
On complementing sets of nonnegative integers, <i>A. M. Vaidya</i>	43
On finite subsets of the plane and simple closed polygonal paths, <i>M. C. Gemignani</i>	38
On squares in arithmetic progression, <i>M. T. Goodrich</i>	87
On solutions of certain Riccati differential equations, <i>J. S. W. Wong</i>	141
On the complete independence of the axioms of a seminatural system, <i>S. T. Stern</i>	232
On the solution of the quartic, <i>R. W. Packard</i>	63
On the solution of the real quartic, <i>W. F. Carpenter</i>	28

Parametrization of certain quadrics, <i>A. R. Amir-Mo\ddot{z}s</i>	277
Proof of the impossibility of trisecting an angle with Euclidean tools, <i>Tzer-Lin Chen</i>	239
Shortcut to summation of infinite series, <i>D. O. Ehrenburg</i>	93
Shortest paths within polygons, <i>R. A. Jacobson and K. L. Yocom</i>	290
Similar triangles, <i>J. G. Mauldon</i>	165
Some elementary properties of the fundamental solution of parabolic equations, <i>Ronald Guenther</i>	294
Some radical axes associated with the circumcircle, part III, <i>D. M. Bailey</i>	9
Some results pertaining to Fermat's conjecture, <i>G. J. Simmons</i>	18
Square roots by an iterative method and its generalization to positive integral roots of order n , <i>T. R. G. Bauerochse</i>	219
The analyticity of the roots of a polynomial as functions of the coefficients, <i>D. R. Brillinger</i>	145
The circular function(s), <i>W. F. Eberlein</i>	197
The function game, <i>Scott Guthery</i>	148
The integration of inverse functions, <i>J. H. Stab</i>	223
The iteration of means, <i>Lloyd Rosenberg</i>	58
The mathematics of the round-robin, <i>Henry Winthrop</i>	22
The real solutions of $x^p = y^q$, <i>A. F. Beardon</i>	108
The relation of $f'_+(a)$ to $f'(a+)$, <i>W. E. Langlois and L. I. Holder</i>	112
The stereographic projection in vector notation, <i>C. F. Marcus</i>	100
The washing of socks, <i>P. B. Johnson</i>	77
Two groups associated with ruled surfaces, <i>F. H. Sweet</i>	205
Various proofs of Newton's theorem, <i>Kaidy Tan</i>	45
Von Aubel's quadrilateral theorem, <i>P. J. Kelly</i>	35

ARTICLES BY AUTHORS

<i>Abramson, Morton, and Moser, William</i> , Combinations, successions, and the n -kings problem	269
<i>Alder, H. L.</i> , Announcement of L. R. Ford Awards	258
<i>Amir-Mo\ddot{z}s, A. R.</i> , Parametrization of certain quadrics	277
<i>Bailey, D. M.</i> , Some radical axes associated with the circumcircle, part III	9
, Homologous point in the medial triangle	236
<i>Bauerochse, T. R. G.</i> , Square roots by an iterative method and its generalization to positive integral roots of order n	219
<i>Beardon, A. F.</i> , The real solutions of $x^p = y^q$	108
<i>Brillinger, D. R.</i> , The analyticity of the roots of a polynomial as functions of the coefficients	145
<i>Brock, W. A. and Thompson, R. G.</i> , Convex solutions of implicit relations	208
<i>Burke, J. F.</i> , A curve of constant diameter	84
<i>Cargo, G. T.</i> , A connection between two theorems in the theory of Riemann-Stieltjes integration	202
<i>Carlitz, Leonard</i> , A theorem of Schemmel	86
, An inequality for the perimeter of the orthic triangle	289
<i>Carpenter, W. F.</i> , On the solution of the real quartic	28
<i>Chen, Tzer-Lin</i> , Proof of the impossibility of trisecting an angle with Euclidean tools	239
, Approximate trisection of an angle with Euclidean tools	261
<i>Chen, Wai-Kai</i> , Boolean matrices and switching nets	1
<i>Deakin, M. A. B.</i> , Functions of a dual or duo variable	215
<i>Demir, Huseyin</i> , Maximum area of a region bounded by a closed polygon with given sides	228
<i>Dilley, N. R.</i> , A decomposition of the integers to generate graphs	30
<i>Dotson, W. G., Jr.</i> , Linearization transformations for least squares problems	178
<i>Duemmel, James</i> , Diagonalizing positive definite matrices	226
<i>Eberlein, W. F.</i> , The circular function(s)	197
<i>Ehrenburg, D. O.</i> , Shortcut to summation of infinite series	93
<i>Fraley, Robert; Cooke, K. L. and Detrick, Peter</i> , Graphical solution of difficult crossing puzzles	151
<i>Gemignani, M. C.</i> , On finite subsets of the plane and simple closed polygonal paths	38
, More on finite subsets and simple closed polygonal paths	158

Goodrich, M. T., On squares in arithmetic progression.....	87
Guenther, Ronald, Some elementary properties of the fundamental solution of parabolic equations.....	294
Gulhery, Scott, The function game.....	148
Jacobson, R. A. and Yocom, K. L., Shortest paths within polygons.....	290
Johnson, P. B., The washing of socks.....	77
Kelly, P. J., Von Aubel's quadrilateral theorem.....	35
Lan, Chich-Chin, An extension of the mean-value theorem in E_n	91
Langlois, W. E. and Holder, L. I., The relation of $f_+'(a)$ to $f'(a+)$	112
Lind, D. A., A geometric interpretation of the solutions of $y'' = c^2 y$	273
Manheim, J. H., Another look at differentiation.....	89
Marcus, C. F., The stereographic projection in vector notation.....	100
Matlak, R. F., A proof of the formula representing the logarithm as the limit of a sequence.....	64
Mauldon, J. G., Similar triangles.....	165
Moon, J. W., Disjoint triangles in chromatic graphs.....	259
Ogilvy, C. S., Generating a hyperboloid.....	276
Packard, R. W., On the solution of the quartic.....	63
Rosenberg, Lloyd, The iteration of means.....	58
Seiner, J. A., Curvature by normal line convergence.....	147
Sheng, T. K. and Daykin, D. E., On approximating polygons by rational polygons.....	299
Shisha, O., Geometrical interpretations of the inequalities between the arithmetic, geometric and harmonic means.....	268
Simmons, G. J., Some results pertaining to Fermat's conjecture.....	18
Singmaster, David, A maximal generalization of Fermat's theorem.....	103
South, J. C., Note on the matrix functions $\sin \pi A$ and $\cos \pi A$	287
Staib, J. H., The integration of inverse functions.....	223
Stern, S. T., On the complete independence of the axioms of a seminatural system.....	232
Sutcliffe, Alan, Integers that are multiplied when their digits are reversed.....	282
Sweet, F. H., Two groups associated with ruled surfaces.....	205
Tan, Kaidy, Various proofs of Newton's theorem.....	45
, Finding the cube root of binomial quadratic surds.....	212
Trahan, D. H., A new type of mean value theorem.....	264
Vaidya, A. M., On complementing sets of nonnegative integers.....	43
van de Lindt, W. J., A geometrical solution of the three factory problem.....	162
van Heerden, P. J., Logical paradoxes are acceptable in Boolean algebra.....	175
Vaughan, H. E., Another remark concerning the definition of a field.....	161
Venkatramaiah, S., A remark on a note of S. M. Shah.....	225
Vinh, N. X., Ellipse of least eccentricity.....	203
Weiner, L. M., Note on Newton's method.....	143
Winthrop, Henry, The mathematics of the round-robin.....	22
Wong, J. S. W., On solutions of certain Riccati differential equations.....	141
Yale, P. B., Automorphisms of the complex numbers.....	135
Zirakzadeh, A., An exact perimeter inequality for the pedal triangle.....	96
Editorial Note.....	300

BOOK REVIEWS

EDITED BY DMITRI THORO, San Jose State College

Names of authors are in ordinary type, those of reviews in capitals.

Beiler, Albert H. *Recreations in the Theory of Numbers—The Queen of Mathematics Entertains*, SISTER M. PHILIP STEELE, 186.

Berman, G. N. *A Collection of Problems on a Course of Mathematical Analysis*, A. E. TAYLOR, 68.

Cook, Earnshaw. *Percentage Baseball*, EDGAR SIMONS, 303

David, Philip J. *The Mathematics of Matrices*, D. G. DUNCAN, 124.

Drobot, Stefan. *Real Numbers*, JOHN SCHUE, 185.

Gelbaum, Bernard R. and Olmsted, John M. H. *Counterexamples in Analysis*, R. H. BROWN, 302.
 Grossman, Israel and Magnus, Wilhelm. *Groups and Their Graphs*, A. A. MULLIN, 242.
 Johnson, R. E. and Kiokemeister, F. L. *Calculus with Analytic Geometry*, R. C. MEACHAM, 122.
 Keedy, Mervin L. *Number Systems*, S. J. BEZUSZKA, 244.
 Kiokemeister, F. L. See Johnson, R. E.
 Lanczos, Cornelius. *Albert Einstein and the Cosmic World Order*, R. C. WREDE, 65.
 Lange, Serge. *A First Course in Calculus*, R. C. MEACHAM, 123.
 —, *A Second Course in Calculus*, R. C. MEACHAM, 124.
 Long, Calvin T. *Elementary Introduction to Number Theory*, J. D. BAUM, 184.
 Lyusternik, L. A. *Shortest Paths, Variational Problems*, R. C. Wrede, 66.
 Magnus, Wilhelm. See Grossman, Israel.
 McCoy, Neal H. *The Theory of Numbers*, ABRAHAM ROBINSON, 125.
 Meserve, B. E. and Sobel, M. A. *Introduction to Mathematics*, R. B. BRIAN, 121.
 Olmsted, John M. H. See Gelbaum, Bernard.
 Ore, Oystein. *Graphs and Their Uses*, A. A. MULLIN, 243.
 Sawyer, Walter Warwick. *Vision in Elementary Mathematics*, R. L. WILSON, 185.
 Sobel, M. A. See Meserve, B. E.
 Wiener, Norbert. *God and Golem, Inc.*, S. P. R. CHARTER, 66.
 Willerding, Margaret F. *Elementary Mathematics: Its Structure and Concepts*, E. O. GAROT, 301.
 Wren, F. Lynwood. *Basic Mathematical Concepts*, S. J. BEZUSZKA, 304.
 Yaglom, A. M. and Yaglom, I. M. *Challenging Mathematical Problems with Elementary Solutions*, I. D. RUGGLES, 120-121.
 Yaglom, I. M. See Yaglom, A. M.
 Yarnelle, John E. *Finite Mathematical Structures*, P. E. RUTENKROGER, 304

PROBLEMS AND SOLUTIONS

EDITED BY ROBERT E. HORTON, Los Angeles City College

PROPOSALS

Avishalom, Dov, 187, 246	Kravitz, Sidney, 69
Bankoff, Leon, 69, 306	Lloyd, Daniel B., 127
Barr, Stephen, 246	Luthár, R. S., 247
Daiev, Vassili, 306	McNeil, M. B., 70
Dakkah, Yasser, 306	Mozzochi, C. J., 246
Demir, Huseyin, 69, 246, 306	Ogilvy, C. Stanley, 246
Feinman, Roy, 187	Rabinowitz, Stanley, 306
Gioia, A. A., 69	Rao, D. Rameshwar, 187
Goodstein, P. D., 306	Schaumberger, Norman, 126, 188
Goodstein, R. L., 306	Struyk, A., 69
Griffith, Rosemary, 126	Suer, B., 246
Hammer, Joseph, 126	Sutcliffe, Alan, 127
Hickey, Harry, W., 188	Trigg, Charles W., 126, 187, 307
Hunter, J. A. H., 70, 246	Vaidya, A. M., 69
Just, Erwin, 188, 246	Wilansky, Albert, 126
Klamkin, Murray S., 187	Wurzel, Stephen, 247

SOLUTIONS

Arkin, Joseph, 75	Bush, L. F., 307
Bankoff, Leon, 70, 312	Demir, Huseyin, 189
Barnebey, Merrill, 309	Dernham, Monte, 307
Breault, Dermott A., 129	Duncan, Dewey, 130
Bridger, Clyde A., 195	Fettis, H. T., 252
Brown, J. L., Jr., 72	Garstang, Mrs. A. C., 75

Goldberg, Michael, 247, 249, 251
Hansen, Eldon, 190
Hoffman, Stephen, 128
Kerr, F. L., 311
Klamkin, Murray S., 71
Konhauser, J. D. E., 248
Lind, Douglas, 72, 190
Magnuson, E. L., 73
Marston, Howard, 194
Moser, W., 310
Mrozek, W. L., 310
Ogilvy, C. Stanley, 132
Pittie, Harsh, 193

Rabinowitz, Stanley, 248, 308, 314
Singleton, C. R. J., 310
Trigg, Charles W., 73, 133, 253
Van Tassel, L. T., 307
Venkataraman, C. S., 192
Wagner, Carl G., 133
Wolf, Samuel, 127, 313
Wollan, G. N., 311
Woods, Dale, 130
Yocom, K. L., 71, 131
Ziegendorf, Charles, 74
Erratum, 127

Comment on Problem 84, Prasert Na Nagara, 255

Comment on Problem 586, Colin R. J. Singleton, 314

Quickies and Answers

The page on which Quickies appear is in the parentheses following the number of these problems; the page on which the Answers appear is in boldface. 374, 375, 376, 377 (76) (42-43); 378, 379, 380, 381, 382 (134) (111-112); 383, 384, 385, 386, 387 (196) (160); 388, 389, 390, 391, 392 (258) (226); 393, 394, 395, 396, 397 (315) (281).

Comment on Q375, Mark E. Kaminsky, 256.

Comment on Q381, Charles W. Trigg, 315.

